

June 22, 1955

Dear Ralph & Joyce:

We were sorry we could not include a trip to Woods Hole when we visited Amherst last week, but there just wasn't time. I hope the Sussman's have followed our suggestion of looking you up and have conveyed our regards,

I wanted to ask both Lewins for advice on mother-daughter relations in cell division in the algae. I have a fair picture/ of this, I think, in the desmids, but am less informed about other groups. Among the diatoms, for example, I believe there was some concern whether vegetative division could continue indefinitely owing to the progressive diminution of the daughter frustule-- has there been any good or recent work on this? And Caspari told me that in Scenedesmus, the dividing chloroplast does not split in half, but rather than one cell receives a bud. Do you of any record of this?

I hope these illustrations convey what kind of information I am looking for-- cases of more or less regularly repeated unequal divisions. My concern is for analogies with unicateate transduction clones in Salmonella, namely where a motile cell may repeatedly engender one motile, one non-motile daughter. There is also an obvious connection between this and analyses of aging, e.g. along the lines of Sonneborn's work on Stenostomum & perhaps the scarring of the mother cell in yeast, but I still don't know of a particularly good example in multicellular organisms that fits the mother/daughter pattern.

Well, I trust we will see you in Lansing, and that you'll be able to tell us your settled plans at that time.

Yours sincerely,


Joshua Lederberg